REMARKS

Claims 31, 39, 43-48 and 50 have been cancelled. Claims 43-48 and 50 were withdrawn from further consideration. New claims 51-63 have been added so that claims 23-30, 32-38, 40-42 and 51-63 are now in the application.

The Examiner objected to claim 30 on the basis that there were underlines in lines 18 and 19. The underlines were amendments to claim 30 which were made in the Preliminary Amendment. These underlines are not shown in the present amendment. The word "wherein" has been inserted before the phrase "the forming" in line 27 of claim 30 as required by the Examiner.

Claims 23-42 were rejected under 35 USC 112, second paragraph, as being indefinite. In regard to claim 23, the phrase "at first and second lead layer sites" has been deleted so as to overcome the Examiner's objection that this phrase renders the claim vague and indefinite. The word "a" in line 12 of claim 23 has been deleted and the word --the-- has been substituted therefor so as to overcome the Examiner's objection that the phrase "a spin valve sensor" in line 12 of claim 23 renders the claim vague and indefinite. In claim 26 the phrase "in a field that is directed transverse to the ABS" has been amended to recite --in the presence of a magnetic field that is directed transverse to the ABS-- so as to overcome the objection that the phrase in claim 26 is vague and indefinite. In claim 29 the phrase "in the presence of a field is directed parallel to the ABS" has been amended to recite --in the presence of a magnetic field that is directed parallel to the ABS-- so as to overcome the objection that the phrase in claim 29 is vague and indefinite. In claim 30 the phrase "forming the read sensor and the first and second gap layers between the first and second shield layers" in lines 20 and 21 has been amended to recite --forming first and second shield layers with the read sensor and the first and second gap layers located therebetween-- so as to overcome the objection of claim 30 that the claim lacked antecedent basis. The phrase "between an insulation film and the first lead layer in the first end region" in lines 22 and 23 of claim 30 have been deleted along with additional limitations following this phrase so that the lines 22-26 of claim 30 now read "forming an antiferromagnetic oxide film interfacing the first and second lead layers--.

The Examiner indicated the allowability of claims 23-42 if the rejections under 35 USC 112, second paragraph, were overcome. The Applicants submit that these rejections have been overcome and that the remaining claims 23-30, 32-38 and 40-42 are now in condition for allowance.

New claims 51-63 have been added to the application. Claim 51 reads upon Figs. 16A-16E and Fig. 17 and, in reference thereto, recites a method of making a magnetic read head that has a head surface (the ABS which is shown in the plane of the paper in Fig. 17), forming a first shield layer at 414 in Fig. 15, forming a first read gap layer comprising the steps of forming an insulation film 410 on the first shield layer and forming an antiferromagnetic oxide film 419 on the insulation film, forming a spin valve sensor material layer 402 directly on the first read gap layer, forming a mask 422 on the spin valve sensor material layer with first and second openings to the right and left of the mask as shown in Fig. 16B, milling away portions of the spin valve sensor material layer in the first and second openings to expose the antiferromagnetic oxide film 419 and forming a spin valve sensor 402 with first and second edges as shown in Fig. 16C, forming first and second lead layers 404 and 406 on the antiferromagnetic oxide film as shown in Fig. 16D, removing the mask as shown in Fig. 16E, forming the second read gap layer 412 on the spin valve sensor and the first and second lead layers and forming the second shield layer 416 on the second read gap layer as shown in Fig. 15.

In dependent claim 52 the first and second lead layers include ferromagnetic films 450 as shown in Fig. 17. Claim 54, which recites similar limitations as claim 51, further recites forming the first and second lead layers with the ferromagnetic film 450 as shown in Fig. 17, as well as reciting the various layers of the spin valve sensor 402 as shown in Fig. 17. Claims 52 and 53 are dependent upon claim 51 and claims 55-63 are dependent upon claim 54. The Applicants respectfully submit that these claims are in condition for allowance.

Should the Examiner have any questions regarding this document he is respectfully requested to contact the undersigned.

Respectfully submitted,

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